

**Notes from URGWOM Steering Committee Meeting;
November 14, 2002; 10:00 AM; Corps of Engineers Conference Room,
Albuquerque**

In Attendance:

Cyndie Abeyta, USFWS	Bill Miller, WJM Engineering, Inc./Corps
Roberta Ball, Corps	Valerie Provencio, PSB
Ellen Dietrich, SAIC/Corps	Nabil Shafike, NMISC
Don Gallegos, Corps	Marc Sidlow, Corps
Debbie Hathaway, SSPA/NMISC	Gail Stockton, Corps
Conrad Keyes, Jr., Consultant to Corps	Tim J. Ward, UNM
Bill Leibfried, SWCA/NMISC	Dave Wilkins, USGS
Charles Lujan, Pueblo of San Juan	Mark Yuska, USBR

- ❖ Gail Stockton opened the meeting. After self-introductions, she turned the meeting over to Mark Yuska.
- ❖ Mark gave a slide presentation on the operational rules that have been developed for URGWOM. The draft rules documentation is available from the URGWOM web site.
 - The rules are in draft form and reflect an interpretation of what operations decisions are being done now. Most of them reflect controls on reservoir outflows.
 - The rules are heavily accounting-driven and complex. There are 108 rules and 500 functions.
 - The best way to review the rules is by opening the model and navigating through RiverWare to follow the logic and sequencing. They are too complex to adequately review solely through the text in the documentation. However, by accessing the rules documentation, a reviewer can become familiar with the language of the rules.
 - **Question:** Do the rules vary by wet and dry years?
 - **Answer:** The rules are applied in the model using data from an actual year. The model looks up the data in the historic record from a year that is similar to the forecast.
 - The rules typically assume minimum bypass diversion flows to maintain the San Juan-Chama diversion system. The rules allow for less than minimum bypass flows if the inflow is less than the minimum, since diversions of more than the flow in the river cannot be done. There are also rules that limit tunnel flows so the model does not exceed tunnel capacity.
 - **Question:** Is there a narrative description of each rule or just code?
 - **Answer:** There is a plain English description block for every rule and every function, many but not all of which are filled in. When this narrative has been completed, another technical review will be scheduled.
 - Also needed is a description of how the rules work together.

- Rules account for channel capacity limits and adjust reservoir outflows accordingly.
- **Question:** Will there be a presentation on rules at the Rio Grande Compact Engineer-Advisors meeting.
 - **Answer:** Possibly, but this has not been scheduled.
- Don Gallegos has been testing the Abiquiu rule set. He has been trying to test the extremes to ensure that the rules will handle them. Some of his findings are listed below.
 - The pre-evacuation rule that steps down releases is working successfully.
 - An example that tests flows at Chamita and Otowi and maintains the channel capacity below Abiquiu works.
 - Spillway flows and conservation storage examples are working well.
- Mark gave a demonstration of the windows and functioning of the rules in URGWOM to show how a user would navigate through the logic. **He requested that the Steering Committee review the rules, ask questions of the Technical Team, and make recommendations and comments. It was decided that comments on the rules should be submitted to Bill Miller by mid-December.**
- **Question:** How are changes to the rules documented when they are made during a model run?
 - **Answer:** The model file and associated rule set must be saved to an archive to preserve the changes.
 - The changes to the rule set cannot be printed out. During model testing, the user must keep notes of any changes made.
- **There was a recommendation from the Steering Committee to create a user group that could develop methods for using and saving the model runs.**
- Information on who is responsible for archiving and maintaining URGWOM will eventually be posted on the web site.
- ❖ Mark updated the group on progress in development of the Planning Model.
 - The historic data from 1975 through 1984 are being collected and entered into a database.
 - Brad Vickers has been updating the rules to combine accounts into 5 San Juan-Chama accounts.
 - El Vado is now a power plant object instead of just a storage reservoir.
 - Don has been debugging the water operations rules.
- ❖ Bill Miller summarized the status of the documents since the Technical Review Committee comments were received.
 - The documents have been updated but are not yet on the web site. All changes to documents and revised versions will be printed and posted on the web site by mid-December.
 - Bill has been preparing responses to comments that did not result in changes to the documents. These will be included in a package to the Steering Committee by mid-December.
 - Rules changes being developed now will not be included in the December revisions but there will be recent versions of the rules.

- ❖ Mark Yuska distributed a handout of Technical Team activities and progress in model development. The list in the handout is appended below.



- ❖ **The next meeting of the URGWOM Steering Committee will be held on December 12 at 10:00 a.m. in the Corps conference room.**

STATUS OF URGWOM TECH TEAM ACTIVITIES—MARK YUSKA

People:

- Marc Sidlow has moved up and out, but has been gracious and helpful still.
- Don Gallegos has joined the team on a half-time basis.
- Dave Wilkins is working fulltime, pending the '03 budget.

Activities:

- Team has continued doing Water Operations Modeling for ESA scenario-runs: 3-year and 1-year.
- Set up data and model for ESA runs (not trivial), not totally successful. It is good for testing and debugging the model and rules.
- We think middle valley losses are modeled too high and are investigating.
- Devised a plan to test Water Operations Model Rules, and are proceeding.
- Planning Rules will come from tested Water Operations Rules.
- The following rules have been tested @ Abiquiu
 - ♦ Carryover
 - ♦ Channel Capacity
 - Below Abiquiu (1,800 cfs)
 - @ Chamita (3,000 cfs)
 - @ Otowi (10,000 cfs)
 - ♦ Spillway Flows (Flood Control)
 - ♦ Conservation Storage
 - ♦ Pre-evacuation
 - ♦ ESA
 - ESA runs - dry, average & wet precipitation years
- El Vado has been converted to a level power reservoir, however, tailwater and turbine invert elevation data are missing.
- A Middle Valley model has been modified to include San Felipe to Paseo del Norte and Central to Isleta reaches.
- All 2001 water year data are in the DSS database.
- Data has been provided to Weston Solutions that will be used to update the web page.

- April Fitzner has collected 1975 through 1984 USBR reservoir data to fill in our data holes and data are being digitized and checked.

Meetings:

- Held Technical Team meeting 9/9/02 with Brad Vickers to scope all work on Planning Model.

Issues:

- We need some information for use with Planning Model: Land use, wastewater return, crop acreage, diversion and return trends, for example.
- Getting one 40-year sequence from '75-'99 data for Planning Model run from Debbie Hathaway.
- New PC runs the ESA model about 3 times as fast as URG3. Running the Planning Model for 40-years is going to be a squeeze!